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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/510,856	02/23/2000	Yoshinari Higuchi	SONYJP 3.0-103	3754

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EXAMINER

YODER III, CHRISS S

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/510,856

Applicant(s)

HIGUCHI ET AL.

Examiner

Chriss S. Yoder, III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The examiner recommends a title such as "Video camera with low battery level warning device."

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
4. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 4 will be examined as understood by the examiner: "A video camera according to claim 2, wherein detector means for detecting the voltage value of the battery pack is comprised in the battery pack or the video camera body."

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claim 1 and 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiozawa et al. (US Patent # 4,269,494) in view of Ninomiya (US Patent # 5,287,286).

8. In regard to claim 1, the Shiozawa reference discloses the use of a battery level warning device on a video camera (column 1, lines 6-9) and a warning display means (column 1, lines 60-61). Therefore, it can be seen that the Shiozawa reference lacks a control device for obtaining a reference voltage from a correction value based on capacity data received from the battery pack, a comparison between the voltage of the battery and the reference voltage, and a warning display control that controls the display of the warning when the battery level falls below a predetermined level. Ninomiya discloses a control device for obtaining a reference voltage (column 2, lines 23-34), a comparison between the voltage of the battery and the reference voltage (column 2, lines 40-44), and after the comparison, the warning display control sends out the warning signal when the battery level falls below a predetermined level (column 6, lines 22-23).

Ninomiya teaches that the comparison between voltages is necessary in order to determine the residual capacity of the battery and to send out the warning to allow the user ample time to replace or charge the battery pack. Therefore, it would have been obvious to modify the Shiozawa device to include a control device for obtaining a reference voltage from a correction value based on capacity data received from the battery pack, a comparison between the voltage of the battery and the reference voltage, and a warning display control that controls the display of the warning when the battery level falls below a

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predetermined level in order to give the user a notification in advance to complete battery failure so as to allow time to replace or charge the battery without abnormal operation.

9. In regard to claim 3, the Ninomiya reference discloses the subtraction of the correction voltage based on the capacity of the cell in the battery, from the prior-to-end warning voltage, then adds this to the end voltage to obtain the reference voltage (column 2, lines40-53).

10. Claim 2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiozawa et al. (US Patent # 4,269,494) in view of Ninomiya (US Patent # 5,287,286) as applied above in claim 1, and in further view of van Phuoc (US Patent # 5,633,573).

11. In regard to claim 2, the primary reference discloses the use of a battery level warning device on a video camera, a warning display means, a control device for obtaining a reference voltage from a correction value based on capacity data received from the battery pack, a comparison between the voltage of the battery and the reference voltage, and a warning display control that controls the display of the warning when the battery level falls below a predetermined level. Therefore, it can be seen that the primary reference lacks the use of a memory in the battery pack for storing the end voltage value. Van Phuoc discloses the use of a memory in the battery pack for storing the end voltage value (column 5, line59-60). Van Phuoc teaches that the storage of information about the battery is preferred in order to provide accurate information on the battery's present state of charge, and how best to recharge the battery to

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maintain maximum battery life. Therefore, it would have been obvious to one of ordinary skill in the art to modify the primary reference to store the end voltage in the battery pack in order to provide accurate information on the battery's present state of charge, and how best to recharge the battery to maintain maximum battery life.

12. In regard to claim 4, the Shiozawa reference discloses that the battery pack voltage level detector is located in the camera (column 1, lines 55-60).

13. In regard to claim 5, which is a method claim, corresponding to the apparatus claims 1-4. Therefore, claim 5 is analyzed and rejected as previously discussed with respect to claims 1-4 above. The primary reference above discloses a reference voltage obtained by subtracting a voltage correction value from a prior-to-end warning voltage at which a end of use of battery is warned, the reference value and the voltage of the battery pack are compared, and a warning is displayed if the voltage of the battery is equal or lower than the reference voltage.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US006157169A: note the use of a battery monitor that displays the residual capacity of the battery.

US005870685A: note the use of a battery monitor that warns the user when the battery reaches a predetermined level.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (703) 305-0344. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 306-0377.

CSY
October 1, 2003


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
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